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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOOSE-LEAF FIELD NOTEBOOK

9-157

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Bullhead section (open) ——— 1

Rt. 63 section (cont.) loc 195 ^ 30A and 30B ——— 5

Laundry dam loc 35 ^ ——— 7

2 mi. S. Bullhead loc 26 ^ ——— 8

McLaughlin Rd #1 loc 18 ^ ——— 10

McLaughlin Rd #2 loc 17 ^ ——— 11

Green Grass Butte loc 34 ^ ——— 12

Second cut. N. Little Eagle (Loc. 21) ——— 16

Karl M. Waage
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6/13 3 1 Bl[illegible] William E. [illegible] 03 Show Arm [illegible]
2 [illegible] H.[illegible] [illegible]

Bullneza localities –

Search for good section in bluffs rather futile as fossiliferous beds can't be tied in accurately with upper part of section.

Route 63 section continued.

Loc. 195 Large barren conc. layer at top cliff above gully followed N. along strike to Loc. A-1. Following section is measured up from the big barren layer.

(1)
A 2.0-4.0 Conc. layer, large bon weathering barren ls. concs which loc. form [illegible] weather...

(2)
B 10.0 Covered. Sand wash. Few spots show v fg shaly ss with some ferruginous stains. So is subsequent bc.

(3)
C 0.6 Conc layer. Blue grey barren [illegible]. Thin silty rind weathers grey. About 1' above scatt fossil. concs. P. ling. Echinoid spines

(4)
D 9.5 Covered. prob as in 10.0 interval.

(5)
E 1.0-3.0 Conc zone, mixed platy yellow weathering and hard dk grey drum like concs.
Fossils limestone concs.
(Sample)

Above this not clearly in place.

Route Section - Loc. A-2

26 [illegible] covered slope between big conc zone & [illegible] This conc zone may be [illegible] [illegible] with Zone

The section at Loc. A-1 is skeletal. Numerous fossil cones in float but few in place. The fossiliferous zones just above barren zones in C may be source of some of it and cones at E are too, but may also be more float from higher horizons

Loc 35

Section at dam
water level in pool below spillway

(1) 15.0 Sandstone vfg with interbeds of siltstone and shale SS. Latter weathers grey, remainder brownish grey. Scat fos. Incl large Ideunc
A-346

(2) 0.3 Thin platy limestone conc zone brown

(3) 3.0 Sandstone vfg with beds but mostly shale layers.

(4) 1.0 2.6 Large OB weath to conc, scat. large Ideuncrea
A1325

(5) 13.5 Sandstone, vfg exfoliates, scat large Ideuncrea in sand. Few scat fos. conc

(6) 3.5 Hvy bedded, platy weathered, wood is core weathers OBJ RB. Interbedded

(7) 24.0 Light brown SS as above with scat. fos. Containing plant fos
(A 345

loc 26

2 mi. S. Lewisburg

Note for shaly ready clay-y
Slopewash + grass

(1) 12 --? Siltst. shaley dark gray, with ferrug. stain loc. Weathers brownish gray, scattered jarosite nodules. Scattered throughout are small gray ls. concs of irreg shape, few large with gray silty rinds (chiefly 100 from top) Small gervillia, ? crenella, D. nic. fossils. Few large gervillias

(2) 1. "Barren" conc zone, large clipsoidal to tabular lt gray weathg. algal mixed concs of blue gray ls. No rinds some recrystn. Few scat crenellas

(3) 3.5 Siltstn shaly, as above, with loc. huge Gervillia-Crenella concs 1.5-2.5 from base and scatt gervillia concs + accumulations about at 3.5 (Zone B collections)

(4) 5.0 Siltstn shaly, as above.

(5) 6.7 Siltstn shaly, as above, but with concent. jarosite, and scattered fossil. concs, ls, wrapped in gray silty rinds. These in lower 3.0 others consist of rare-less gray rinds - some with poorly preserved foss.

(6) 9.0 Siltstn, dk gray shaly with gyp, forms dk band on outcrop, loc rounded over grades to overlying unit.

(7) 12.0 Siltstn, shaly, [redacted] gray [redacted] gray streaks, weathers [redacted]

262

Zone C coll. 266

8

Loc. Fe-stained band OB 6' from top

(8) 0.2 – 1.5	conc. ls, weaths red brn, yellow [illegible] in cracks, rare scale [illegible]
(9) 6.0	Siltstn grading to finer SS, dk grey ~~shaly~~ clayey.
(10) 0.3	Loc. zone small ellips. red brn weathd ls. concs.

McLaughlin road Loc 1 Locality 18.

Measuring up from top yellow sulphur zone concentration which is about 1½ th k above 1½ th Bentonite

(1) 8.0 ft Siltstn shaly, grey, with jarosite stains. weathers yellowish grey. about 1.0 – 3.0 from base are crumbly grey concs., is cores, grey silty jackets and gyp (dk grey) rinds.
Nicollet conc at 6.0–7.0. 18a

(2) 5.0 Siltstn, grey, weath brown – grey with irreg streaks of dark grey shale. In lower 2.0 ft are small O.B. ferruginous concs up to 0.3 in diam.
At 5.0 is fossiliferous conc in place. 18b
(see call., weathered in. to appreciable rind.

(3) 2.0 (+) Brown silty shale to lower bottom is. concs.

McLaughlin road Loc. #2 — Locality 17

Two zones of concs. in road cut

Approx. measurement

(1) 1.5± concent. of jarosite in silty shale shly gray silt. Includes both round + big tabular concs with dark gyp outer rind, silty platy inner end with loc. ls. concs

(2) 3.5 As be over but with less of jarosite. See Hered ellipsoidal concs ~~with~~ same as in 1.5 below. Both Concs include — Large gervillia. Coll 17a D. nicolleti + D. ret sp. (See McLaughlin rd 2 coll. A)

(3) 10.0 Brownish weath grey shaly silt with large concs, mixed up chiefly of "crenella" + small gervillia. Coll 17b (See McLaughlin rd 2. coll. B.)

(4) 3.0 siltst as above ~~with~~ to grass roots.

4.5 above upper Jerosite zone is conc with Sepiolid.

10.0+ below the lower Jerosite zone is first appearance ovoid, black is conc. white weathers red-purple. Dusters chiefly brown, [illegible] white, black [illegible] stained surfaces

[loc 34]

Grey Grass Butte

Base at green bed at gully foot.

To W. base few feet brownish silty.

(1) 7.6 Siltstone, clayey, dark gray, weathers [illegible] ... some ...

(2) 7.7 Big silty conc with small CaCO3 core + golden zeolite weathers reddish-sits on ~~boulder~~ yellow band at base. As above with small gray shale ... conc. bottom - grades ... and yellow ... concretionary at top. (2)

(3) 12.0 ... dk gray clayey ... some Vfg sand. Intermittent ... bedding is ... with gray CaCO3 ~~in upper~~ chiefly in upper 3', one is conc with septaria 9.5 from base - weathered.

A 1408

(4) 5.2. ... gray, weathers ... brownish ... Some small red weathering ...

(5) 7. ... Zone of ... zone. Scattered concretions in 2 silty zone - some partial induration of silt.

... concretionary zone with tough gray ... Also hard dk blue gray limestone conc.

[Coll. A. from large poorly ty...]

A 338

Large spheres in shale 1.0 above this zone.

12

(6) 29.6

(7) 5.0

A-339

(8) 2.0

A 340

(9) 13.3

(410± above base 30m (sea level) tos cones small cones Plinga Prod. sh.

(10) 2.0-3.0 Coll (G+4)

A 341

(11) 10.0

(12) 2.

Jigsaw Ridge

A 342 Coll E

13

Have-Some fauna Lenox Co., Pu + Pl, Spicules. Dentalium

(13) 17.0 Sandstone, q + dark + clayey, left, weathers light gray, some gray on fresh. Section Cret.-Tert. Foraminifera, Pinnigotrianis, Pavonia

Cocolith limestone 3.0 to 4.6

(14) 18.5 Sandstone, very glauconitic, dark gray to dk greenish gray, weathers darker gray. Has some glauconite. Brownish ... chip float from chalcedonic ... and also ... some ... Spicules.

Is cemented ... From base =

Coll. F A 343

2.8 - 3.5 Scott Co. ... ellipsoidal, ... Coll.

7.5 - 8.1 = Fiet ...

... Remaining ... has some F ... Upper 2.0 begins to grade to unit above.

(15) 22.0 Sandstone, lightgray, fine-grained ... clay ... Studied ... worked. Unit weathers ... Once was hard cap ...

[illegible]

Coll G - A 344 - Float from both the butte and small prominences near the road

[illegible]

Loc. 21

Section road cut N. L.H. Eagle.

G.
Road gulley

(1) 4.5 — Shale, dark-gray, very finely silty.

(2) 1.0± — Shale, gray, highly silty, weathers brownish.

(3) 8.0 — Shale, gray, silty, with scattered jarosite blebs. Weathers streaked light gray & brownish gray, upper 10–20 ft has heavy concentration jarosite. Much selenite float. Few burrow casts in upper foot – grays "zebra".

(4) 5.3 — Shale, gray, sandy to shaly silty, w. with jarosite [illegible] & blebs. Weathers light brownish gray. Conc. scattered in [illegible] sandy layers, many jarosite gyrinids, few in upper 2.3 fossiliferous. — Coll. Aug 26 A. — D. nic. etc. selenitic

(5) 4.5 — Silty as below, scatt concs in upper 3'. Thin micritic concs among these about 2.5 from top. At top .2 of vfg sand, appears, some fos concs at top of interval, with, big + light gervillia, D. nic.

(6) 9.0 — Siltstone, as in above, lt. jarosite, in upper 2.0 ± scat. gervillia concs. Conchy row at top and one 2' from top. Lower row somewhat dk brown.

Coll. Aug. 26 B. "protected" type.

Coll. Aug 26 B is from single conc. 2' beneath Gervillia conc's. Note that at Whitehorse road distance between the two types is greater whereas at 2 mi. S. Bullhead locality — (and at Linton?) the two are combined into large 2-part concretions with the Gervillias on top.

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